

APPENDIX B – INTERCHANGE OPTIONS CONSIDERED

The development of alternatives considered a number of different interchange configurations for existing and planned interchange locations along I-15. Table B-1 summarizes the interchange location and configuration and the status of the interchange type.

Tab B-1 contains Figures B-1 through B-20. These figures illustrate UDOT's preferred interchange type for each location.

Tab B-2 contains Figures B-21 through B-38. These illustrate the alternative interchange configurations considered but not advanced into the DEIS for further evaluation.

Table B-1: Summary and Status of Interchange Configurations Evaluated

Interchange Location and Option	Status and Reason for Elimination
South Payson Interchange (Exit 248)	
Option 1 - Diamond	Advanced for further consideration
Option 2 - Realigned Diamond	Eliminated - alignment is not compatible with City's Transportation Plan
Option 3 - Realigned Diamond	Eliminated - alignment is not compatible with City's Transportation Plan
Option 4 - Realigned Diamond	Eliminated - alignment is not compatible with City's Transportation Plan
Option 5 - SPUI	Eliminated - higher costs and does not adequately address access into businesses located in northwest quadrant
North Payson Interchange (Exit 250)	
Option 1 - Diamond (Existing Main Street Alignment)	Eliminated - does not adequately address access problems at Flying J
Option 2 - Realigned SPUI	Eliminated - higher costs and impacts to businesses
Option 3 - Realigned Diamond	Advanced for further consideration
Option 4 - Realigned Diamond (Skewed Main Street Alignment)	Eliminated - does not adequately address access problems at Flying J
Option 5 - Realigned Diamond (Realigned Main Street)	Eliminated - does not provide continuity to traffic patterns along Main Street
SR-164 Benjamin Interchange (Exit 253)	
Option 1 - Diamond	Eliminated - does not adequately address safety issues related to existing at-grade railroad crossing; undesirable skew
Option 2 - Realigned Diamond	Advanced for further consideration
Option 3 - Realigned SPUI	Eliminated - higher costs; increased traffic performance was not warranted
US-6 / Spanish Fork Interchange (Exit 257 & 258)	
Option 1 - Diamond w/ SB Loop	Eliminated - safety concerns associated with slow-speed loop ramps
Option 2 - Diamond w/ 2 SB Loops	Eliminated - safety concerns associated with slow-speed loop ramps
Option 3 - Diamond w/ SB Flyover	Advanced for further consideration
New Spanish Fork / Springville Interchange (Exit 259)	
Option 1 - Diamond	Eliminated - improvements are proposed to adjacent interchanges. Did not meet FHWA warrants
Option 2 - SPUI	Eliminated - improvements are proposed to adjacent interchanges. Did not meet FHWA warrants
South Springville Interchange (Exit 260)	
Option 1 - Diamond	Currently under development as a separate project
Option 2 - SPUI	
North Springville Interchange (Exit 261)	
Option 1 - Existing Diamond w/ modifications	Advanced for further consideration
Provo University Avenue Interchange (Exit 263)	
Option 1 - Existing w/ connection to Airport	Currently being studied as a part of the Provo East-West Connector Study
Option 2 - No Build	Advanced for further consideration
New Provo 920 South Interchange (Exit 264)	
Option 1 - SPUI	Eliminated. Not compatible with City's Long Range Transportation Master Plan; substantial impacts to homes; disrupts local traffic patterns
Option 2 - Tight Diamond	Eliminated. Not compatible with City's Long Range Transportation Master Plan; substantial impacts to homes and disrupts local traffic patterns
Provo Center Street Interchange (Exit 265)	
Option 1 - SPUI	Advanced for further consideration
Option 2 - SPUI w/ Flyover	Eliminated - higher costs and impacts. SPUI functions with an acceptable LOS without the flyover
Option 3 - Tight Diamond w/ Flyover	Eliminated - higher costs and impacts
New Provo 820 North Interchange (Exit 266)	
Option 1 - Diamond	Eliminated as a standalone interchange; not compatible with the City's Long Range Transportation Master Plan; NB On-Ramp does not meet AASHTO standards for maximum vertical grade over railroad
Option 2 - SPUI	Eliminated as a standalone interchange; not compatible with the City's Long Range Transportation Master Plan; NB On-Ramp does not meet AASHTO standards for maximum vertical grade over railroad
Option 3 - Realigned Diamond	Eliminated as a standalone interchange - not compatible with the City's Long Range Transportation Master Plan.
New Orem 2000 South Interchange (Exit 268)	
Option 1 - Realigned Diamond	Eliminated. Not compatible with City's Long Range Transportation Master Plan; substantial impacts to homes and disrupts local traffic patterns
Option 2 - Realigned SPUI	Eliminated. Not compatible with City's Long Range Transportation Master Plan; substantial impacts to homes and disrupts local traffic patterns
Option 3 - SPUI	Eliminated. Not compatible with City's Long Range Transportation Master Plan; substantial impacts to homes and disrupts local traffic patterns
University Pkwy Interchange (Exit 269)	
Option 1 - SPUI	Eliminated as a standalone option. Does not adequately address traffic congestion.
Option 2 - SPUI w/ flyover	Advanced for further consideration in Provo and Orem Options B & D
800 South Interchange (Exit 270)	
Option 1 - Modified Diamond w/ Flyover to UVSC	Eliminated - does not meet driver expectancy, higher costs and does not conform with UVSC's master plan
Option 2 - Diamond	Eliminated - does not meet UDOT standards for spacing between an interchange and adjacent intersection
Option 3 - Diamond Option A	Eliminated - does not conform to UVSC's master plan
Option 4 - Diamond Option B	Eliminated - does not conform to UVSC's master plan
Option 5 - Diamond Option C	Eliminated - does not conform to UVSC's master plan, substantial impacts to homes and disrupts local traffic patterns
Option 6 - Split Diamond w/ U-Turn Option D	Eliminated - does not meet driver expectancy, higher costs and does not conform with UVSC's master plan
Option 7 - Diamond Option E	Eliminated - does not conform to UVSC's master plan
Option 8 - Diamond Option F	Advanced for further consideration in Provo and Orem Options A & C

Table B-1: Summary and Status of Interchange Configurations Evaluated

Interchange Location and Option	Status and Reason for Elimination
Orem Center Street Interchange (Exit 271)	
Option 1 - SPUI	Advanced for further consideration
Option 2 - Diamond w/ Roundabouts	Eliminated - does not meet driver expectancy
Option 3 - SPUI w/ Roundabout @ 1200 W	Eliminated - does not meet driver expectancy
Orem 800 North Interchange (Exit 272)	
Option 1 - Diamond	Eliminated - does not perform as well as the SPUI
Option 2 - SPUI	Advanced for further consideration
Orem 1600 North Interchange (Exit 273)	
Option 1 - Diamond	Advanced for further consideration
Option 2 - Realigned SPUI	Eliminated - substantial impacts
Option 3 - Split Diamond	Eliminated - safety concerns with at-grade railroad crossing conflict with ramps
Pleasant Grove Interchange (Exit 275)	
Option 1 - Diamond	Advanced for further consideration
Option 2 - SPUI	Eliminated because existing interchange performs with an acceptable LOS
American Fork 500 East Interchange (Exit 276)	
Option 1 - Diamond	Advanced for further consideration
Option 2 - Realigned SPUI	Eliminated - higher costs and impacts
American Fork Main St Interchange (Exit 278)	
Option 1 - Diamond	Advanced for further consideration
Option 2 - Realigned Diamond	Eliminated - does not perform as well as the SPUI
Option 3 - Realigned SPUI	Advanced for further consideration
Option 4 - Trumpet	Eliminated - does not perform as well as the SPUI
Option 5 - Realigned Trumpet	Eliminated - does not perform as well as the SPUI
Lehi Main Street Interchange (Exit 279)	
Option 1 - SPUI	Advanced for further consideration
Option 2 - Split Diamond (Partial Option 1)	Eliminated - traffic results did not warrant increased impacts, increased costs and disruptions to local traffic patterns
Option 3 - Split Diamond (Partial Option 2)	Eliminated - traffic results did not warrant increased impacts, increased costs and disruptions to local traffic patterns
Option 4 - Split Diamond (Full)	Eliminated - traffic results did not warrant increased impacts, increased costs and disruptions to local traffic patterns
New Lehi 400 West Interchange (Exit 281)	
Option 1 - Realigned Diamond	Eliminated - improvements are proposed at adjacent interchanges and therefore does not meet FHWA warrants, safety concerns with at-grade railroad crossing, does not meet AASHTO standards for railroad crossings, substantial impacts and disruptions to local traffic patterns
Option 2 - Realigned SPUI	Eliminated - improvements are proposed at adjacent interchanges and therefore does not meet FHWA warrants, safety concerns with at-grade railroad crossing, does not meet AASHTO standards for railroad crossings, substantial impacts and disruptions to local traffic patterns
Option 3 - Couplet	Eliminated - improvements are proposed to adjacent interchanges and therefore does not meet FHWA warrants, does not meet driver expectancy, substantial impacts and disruptions to local traffic patterns
Option 4 - Tight Diamond	Eliminated - improvements are proposed at adjacent interchanges and therefore does not meet FHWA warrants, safety concerns with at-grade railroad crossing, does not meet AASHTO standards for railroad crossings, substantial impacts and disruptions to local traffic patterns
Lehi 1200 West Interchange (Exit 282)	
Option 1 - SPUI	Advanced for further consideration
Alpine Interchange (Exit 284)	
Option 1 - Diamond	Eliminated - does not adequately address traffic congestion
Option 2 - SPUI	Advanced for further consideration
Option 3 - SPUI w/ flyover	Eliminated - higher costs
North Lehi Interchange (Exit 285)	
Option 1 - Diamond	Eliminated - does not perform as well as the SPUI and was similar in costs and impacts
Option 2 - SPUI	Advanced for further consideration
Bluffdale Interchange (Exit 288)	
Option 1 - Diamond w/ Flyover	Eliminated. Proposed Mountain View Corridor EIS to address proposed future alignment changes to 14600 South
Option 2 - SPUI w/ Flyover	Eliminated. Proposed Mountain View Corridor EIS to address proposed future alignment changes to 14600 South
Option 3 - Diamond	Eliminated - does not perform as well as the SPUI and was similar in costs and impacts
Option 4 - SPUI	Advanced for further consideration

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